

ABSTRACT

The volumetric efficiency and power of internal combustion engines is improved with an intake port having an intake nozzle, a venturi, and a surge chamber. The venturi is located almost halfway upstream the intake port between the intake valves and the intake plenum enabling the venturi throat diameter to be exceptionally small for providing an exceptionally high ram velocity and an exceptionally long and in turn high efficiency diffuser flowing into the surge chamber. The intake port includes an exceptionally large surge chamber volume for blow down of the intake air into the working cylinder of the engine.